

CLAIM AMENDMENTS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims

1 1. (Currently Amended) A display device that reduces energy consumption during
2 row transitions comprising:
3 ~~with~~ a plurality of pixels arranged in an array having n rows and m columns,
4 each of said pixels comprising:
5 a switching element having a gate, and
6 a capacitor coupled to said switching element;
7 ~~rows n and columns m, wherein the pixels of a row can be selected through~~
8 ~~control lines and data lines that select said pixels; , and with~~
9 ~~a row driver circuit for activating~~ that activates each pixel in the n rows by
10 ~~means of a row voltage applied to said gate of said switching element; and with~~
11 ~~a column driver circuit for controlling~~ that controls the m columns with a
12 ~~column voltage, which voltages correspond~~ said column voltage corresponding to the
13 ~~image data of the pixels of the~~ a selected row to be displayed, and
14 ~~wherein, it is provided upon~~ during a transition from a selected row n to
15 ~~another row n+x, said capacitor is charged with an intermediate voltage level~~

16 during discharging of row n and row n+x is charged with said intermediate voltage
17 level by said capacitor after the row voltage of row n is fully discharged ~~that the row~~
18 ~~voltage is connected to an intermediate voltage level, and the row n+x is first~~
19 ~~connected to said intermediate voltage level and subsequently is charged up to the~~
20 ~~required row voltage wherein the charge of the selected row n can be stored in a~~
21 ~~capacitor at the intermediate voltage level.~~

1 2. (Currently Amended) A display device as claimed in claim 1,

2 characterized in that a plurality of intermediate voltage levels is ~~is~~ are ~~are~~ provided
3 for ~~the~~ charge sharing, and the selected row n can be coupled in steps to a first
4 intermediate voltage level and subsequently to ~~the~~ further intermediate voltage
5 levels up to ~~the~~ a final intermediate voltage level for the purpose of charge sharing.

1 3. (Canceled).

1 4. (Currently Amended) A display device as claimed in claim 1,

2 wherein ~~the~~ a maximum column voltage is used as the intermediate voltage
3 level.

1 5. (Currently Amended) A display device as claimed in claim 1,

2 wherein ~~the~~ a voltage corresponding to the intermediate voltage level is half
3 of the applied row voltage.

1 6. (Currently Amended) A display device as claimed in claim 1,

2 wherein a switching unit is provided for first connecting the selected row n,
3 and subsequently the ~~next~~ row n+x to the intermediate voltage level.

1 7. (Currently Amended) A method of reducing energy consumption during row
2 transitions in controlling a display device with pixels arranged in rows n and
3 columns m, each pixel comprising a capacitor coupled to a switching element, said
4 method comprising the following steps:

5 supplying wherein row voltages are supplied to the rows via control lines so
6 as to select said rows;

7 ~~, and wherein supplying~~ column voltages are supplied to the columns m via
8 data lines;

9 during a transition from a selected row n to another row n+x,

10 charging said capacitor to an intermediate voltage level during discharging of
11 selected row n;

12 charging row n+x to said intermediate voltage level with said capacitor after
13 the row voltage of row n is fully discharged

14 ~~, and wherein the rows are consecutively selected, and in the case of a transition~~
15 ~~from a selected row n to another row $n+1$ the charge applied to the selected row n is~~
16 ~~transferred to an intermediate voltage level, and the other row $n+1$ is first~~
17 ~~connected to said intermediate voltage level and is subsequently charged up to the~~
18 ~~required control voltage, wherein the charge of the selected row n can be stored in a~~
19 ~~capacitor at the intermediate voltage level.~~